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REPORT NO. 6

Cotton Fiber and Processing Test Results

CROP of

1973



Agricultural Marketing Service
U.S. DEPARTMENT OF AGRICULTURE
Memphis, Tenn. 38117 November 9, 1973

This is the sixth of a series of reports of fiber and processing test results from the 1973 cotton crop. Subsequent reports in this series will follow at approximately two-week intervals during the harvesting season, and will be summarized in a comprehensive report at the end of the season. This series will present data on the same subject as "Summary of Cotton Fiber and Processing Test Results, Crop of 1972", May 1973. These reports are published by the Standardization Section, Cotton Division, Agricultural Marketing Service, U. S. Department of Agriculture, Memphis, Tennessee.

COTTON FIBER AND PROCESSING TEST RESULTS, CROP OF 1973

Discussion of Test Results

Cotton Division laboratories of the Agricultural Marketing Service, USDA, report the average fiber properties for all medium staple samples tested through November 2 are slightly longer and coarser than samples tested through this period a year ago. Picker and card waste is less than last season. Appearance grades are lower than a year ago. Also these samples show more yarn imperfections.

Southwest short staple samples tested show longer fiber length than last season. Shirley Analyzer nonlint content is higher. Picker and card waste is higher than a year ago. Yarns spun from these samples show lower appearance grades. Average spinning potential yarn number is lower.

Southeast medium staple samples tested to date show about the same fiber properties except for coarser fibers. Shirley Analyzer nonlint content is higher than a year ago. Yarns spun from these samples show more imperfections.

Medium staple samples tested from the South Central are coarser and slightly weaker than a year ago. Picker and card waste is less than last season. Yarns spun from these samples have more imperfections.

Southwest medium staple samples tested to date show fiber strength to be weaker than last season. Picker and card waste is lower. Yarn appearance grades are lower. Imperfections are greater than a year ago. Average spinning potential yarn number is lower than a year ago.

Medium staple samples tested from the West show longer and stronger fibers than last season. Yarns spun from these samples are stronger than a year ago. Yarn appearance grades are lower and imperfections are higher than last season. Average spinning potential yarn number is higher than last season.

Long staple samples tested from the Southeast to date are longer, more uniform and coarser than a year ago. Fiber strength is weaker. Comber waste is less than last season. Yarns spun from these samples are stronger with yarn appearance grades being higher. Imperfections are fewer than a year ago. Average spinning potential yarn number is higher this season.

No additional long staple lots were received from the other areas.

Table 1.--Cotton: Averages of fiber and processing tests from selected gin points in the United States through November 2, 1973 1/

Staple group Area, and Crop year	Lots tested	Fiber test results							Processing test results						
		Fibrograph		Mike fine- ness	Fiber strength		S A nonlint	P & C waste	Yarn quality			Spin. Potent.			
		2.5% span	50/2.5 unif.		Pct.	Rdg.			Mpsi	G/tex	Pct.		Lbs.	Index	No.
		No.	Inches	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	22s	Carded	Yarn	Yarn No.		
Short Staple: Southwest	16	0.98	45	4.4	83	21	2.9	5.8	95	118	23	48			
	13	1.00	46	4.5	84	21	4.0	6.5	98	112	22	45			
Medium Staple: Southeast	24	1.08	45	4.3	84	23	2.8	5.8	107	104	18	68			
	15	1.09	46	4.6	83	23	3.6	5.8	107	106	25	66			
South Central	73	1.09	45	4.5	85	23	2.7	5.8	106	112	18	66			
	45	1.10	46	4.7	84	22	2.8	5.2	106	113	20	64			
Southwest	26	1.07	46	4.5	84	22	2.9	6.0	103	121	22	63			
	25	1.08	45	4.4	81	22	2.6	5.4	100	99	25	60			
West	11	1.10	45	4.4	88	24	2.2	5.1	109	120	16	66			
	8	1.12	46	4.5	94	26	2.1	4.7	122	109	23	69			
U. S. Average	134	1.09	45	4.4	85	23	2.7	5.8	106	113	19	66			
	93	1.10	46	4.6	84	23	2.8	5.3	106	108	23	64			
Significant dif- ference 2/		0.02	2	0.2	2	1	0.5	0.5	4(22s)	5	2	3			

1/ Based on a limited number of samples of modal quality

2/ Minimum differences considered to be significant for comparisons in this table. These guides are based upon averages of a number of lots and are not applicable to individual samples.

Table 1.--Cotton:

Averages of fiber and processing tests from selected gin points in the United States
 through November 2, 1973
 1/ (Continued)

Staple group, Area, and Crop year	Lots	Fiber Test Results						Processing Test Results										SPY
		Length		Unif	Mike	Strength		SA Non- lint	P&C Waste	Comber Waste	Yarn Quality					No.		
						Zero	1/8"				Strength carded	combed	combed	Appearance carded	Imprfctns card		comb	
		Span	In.	Pct.	Rdg.	Mpsi	G/tx	Pct.	Pct.	Lbs.	Lbs.	Indx	Indx	No.	No.			
																gage	gage	
22s Carded & Combed Yarn																		
Long Staple: Southeast 1972 1973	7	1.09	43	4.4	86	23	3.7	8.7	18.5	102	120	104	116	21	11	65		
	4	1.13	45	4.7	82	23	3.8	8.4	17.2	106	120	125	130	16	8	72		
	2	1.17	45	4.4	90	25	3.8	8.1	15.7	117	132	105	115	15	10	78		
	2	1.14	45	4.6	88	24	3.8	8.0	17.0	112	130	125	130	20	8	66		
South Central 1972 1973																		
Significant Difference 2/																		

1/ Based on a limited number of samples of modal quality

2/ Minimum differences considered to be significant for comparisons in this table. These guides are based upon averages of a number of lots and are not applicable to individual samples.

Table 2 --Cotton, American upland short staple: Quality characteristics by production areas, crop of 1973

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns										
No	Grade	Style	32s	Digital Fibrograph		Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non- lint		Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imprfct'ns		Spin. Poten- tial	
				2.5% span	Unif		Zero Gage	1/8" Gage		Pct	Mpsi	G/tex	Pct		Gra	Yel	Pct	8s or 74 tx	22sor 27 tx	8s or 74 tx	22s or 27 tx	8s or 74 tx		22sor 27 tx
SOUTHWEST AREA																								
CENTRAL TEXAS																								
AVALON																								
2	SLM	LT	SP	42	31	1.00	46	4.7	98	20	6.5	3.3	4	4	6.6	287	92	7.0	6.1	130	130	20	20	46
LANKART LX 571 99 PERCENT																								
ITASCA																								
1	LM	LT	SP	52	32	1.02	46	4.5	89	20	6.5	3.9	4	4	8.3	306	98	7.1	6.4	130	110	32	23	51
LANKART LX 571 100 PERCENT																								
WAXAHACHIE																								
2	SLM	LT	SP	42	31	.98	45	4.8	86	20	6.6	2.4	3	4	6.2	296	88	7.2	6.1	130	110	30	23	43
LANKART 57 99 PERCENT																								

Table 3 --Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1973

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns												
No	Grade	Stple	32s	Digital Fibrograph		Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non- Lint	Color Raw Stock		P & C Waste	Strength			Elongation			Appearance Index			Imprfct'ns			Spin. Potent- ial
				2.5% span	Pct		In	Pct			Zero	1/8" Gage		Mpsi	G/tex	Pct	Gr	Yel	22s or 27 tx	50s or 12 tx	Lbs	Pct	22s or 27 tx	50s or 12 tx	No	
SOUTHEAST AREA																										
ALABAMA																										
CUBA																										
1	LM		51	34	1.07	47	5.1	77	20	7.5	3.4	3	3	6.0	101	35	6.5	4.8	120	90	19	11	68			
GREENBRIER																										
1	SLM		41	34	1.06	45	4.6	80	22	7.5	2.8	2	3	5.3	103	35	7.0	5.1	110	90	23	19	57			
HUNTSVILLE																										
1	LM		51	34	1.05	46	5.0	83	22	6.7	3.8	3	3	5.6	97	32	6.7	4.7	110	90	23	23	54			
PRATTVILLE																										
1	SLM		41	35	1.14	46	3.8	94	25	5.9	3.2	2	3	4.9	132	50	7.7	5.2	110	90	20	13	78			
TUSKEGEE																										
1	SLM		41	34	1.09	45	4.9	83	22	7.6	2.0	2	3	4.6	107	39	7.3	5.2	120	90	16	10	67			
TYLER																										
1	SLM		41	35	1.10	46	4.7	85	23	6.4	2.4	2	3	4.8	111	39	6.0	4.7	110	90	15	10	75			
GEORGIA																										
BOSTWICK																										
1	SLM SP		43	34	0.99	46	4.5	86	23	6.2	5.2	4	4	6.0	104	33	6.3	4.4	120	100	12	11	55			
DAKSON																										
1	SLM		41	33	1.07	46	4.8	83	22	7.5	2.9	3	3	5.6	96	30	6.4	4.5	110	80	23	14	62			
REYNOLDS																										
1	SLM		41	34	1.10	45	4.6	87	23	5.8	2.2	2	3	5.1	101	33	5.8	3.8	90	70	27	21	64			
NORTH CAROLINA																										
SHELBY																										
1	SLM		41	35	1.07	45	4.5	82	24	6.6	3.7	3	3	5.6	103	34	6.2	4.1	110	80	26	16	63			
SOUTH CAROLINA																										
CALHOUN FALLS																										
1	LM		51	35	1.12	46	3.9	83	23	6.3	4.7	3	3	7.7	113	40	6.1	4.6	90	80	32	24	77			
MULLINS																										
1	SLM		41	35	1.09	47	5.0	82	23	6.4	3.0	3	3	5.2	97	34	5.5	4.2	110	100	22	15	69			
ST MATTHEWS																										
1	LM LT SP		52	35	1.08	48	5.1	83	23	5.7	7.1	4	4	8.4	107	36	6.4	4.4	90	80	39	26	65			

Table 3 --Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1973--(Continued)

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns										
No	Grade	Name & Code	Style	32s	Digital Fibrograph		Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non- Lint		Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imprct'ns		Spin. Poten- tial
					2.5% span	Unif.		Zero Gage	1/8" Gage		Pct	Mpsi	G/tex	Pct		Gr	Yel	Pct	Lbs	Lbs	Pct	22s or 27 tx	50s or 12 tx	
SOUTH CENTRAL AREA--(Continued)																								
LOUISIANA--(Continued)																								
OAK GROVE																								
1	MID	31	34	1.07	47	5.4	86	22	7.3	1.0	2	3		4.0	105	35	6.3	4.3	130	100	11	7	65	
SHREVEPORT																								
1	GM	11	35	1.12	46	4.9	81	22	7.9	1.6	2	4		4.9	106	37	6.7	4.6	100	70	23	21	66	
MISSISSIPPI																								
ARCOLE																								
1	SLM	41	35	1.14	46	4.7	85	23	7.9	1.9	1	2		4.0	119	42	7.0	5.2	120	90	13	12	72	
BELZONI																								
1	SLM	41	35	1.12	44	4.5	84	22	8.0	3.2	2	2		5.1	113	42	7.3	5.3	110	90	18	11	66	
CLARKSDALE																								
1	LM	51	34	1.10	45	5.0	82	23	6.8	3.7	3	3		6.1	99	33	6.1	4.3	110	80	26	19	66	
EDWARDS																								
STONEVILLE 213																								
1	SLM	41	34	1.10	47	4.9	85	22	6.6	3.1	2	4		5.4	103	33	6.2	4.4	130	90	15	12	58	
FOREST																								
1	SLM	41	34	1.08	45	4.8	81	21	7.0	2.3	2	3		4.8	100	33	6.7	4.7	120	90	15	10	64	
GREENWOOD																								
1	SLM	41	34	1.09	45	5.0	78	23	6.3	4.0	3	3		5.6	102	34	6.3	4.8	110	70	25	17	60	
GUNNISON																								
1	SLM	41	35	1.15	44	4.2	83	22	8.0	2.7	2	3		5.4	115	42	7.2	5.7	100	70	22	21	77	
HOLLY SPRINGS																								
1	SLM	41	35	1.09	47	4.7	83	23	8.2	2.4	2	3		5.6	108	37	6.6	4.9	130	90	21	12	68	
INDIANOLA																								
1	LM	51	34	1.07	47	4.6	92	22	5.7	5.4	3	3		7.6	112	38	6.1	4.3	120	90	23	15	60	
INDIANOLA																								
1	SLM	41	34	1.11	46	5.3	84	22	6.2	2.7	3	3		5.6	102	31	5.8	4.0	120	90	27	22	59	
LELAND																								
1	LM	51	34	1.14	47	4.9	83	23	6.6	4.2	3	3		7.5	106	37	6.4	4.8	110	90	23	18	69	

Table 3 --Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1973 --(Continued)

Production Area, Classification				Fiber Test Results										Processing Test Results - Carded Yarns											
Sample Number		Digital Fibrograph		Mike	Fiber Strength		Elon- gat'n 1/8"		S.A. Non- Lint		Color Raw Stock		P & C Waste		Strength		Elongation		Appearance Index		Imprfct'ns		Spin. Potent- tial		
No	Grade	Stple	In span	Pct	Rdg	Mpsi	G/tex	Pct	Pct	No	No	Gra	Yel	Waste	Pct	Lbs	Lbs	Pct	Pct	No	No	22s or 27 tx	50s or 12 tx	No	
SOUTH CENTRAL AREA--(Continued)																									
MISSISSIPPI--(Continued)																									
MACON																									
1	SLM	41	35	1.14	45	4.4	79	23	7.8	3.3	2	2		4.7		95	114	41	7.0	5.3	110	90	16	13	73
TRIBETT																									
1	SLM	41	35	1.13	46	4.8	97	22	5.5	3.3	2	3		5.9		100	105	33	6.1	3.9	110	80	18	15	61
MISSOURI																									
BELL CITY																									
1	MID LT SP	32	34	1.09	46	4.5	84	23	7.2	2.2	2	3		4.8		100	101	36	6.9	4.8	100	70	25	14	63
SENATH																									
1	SLM	41	34	1.09	44	4.0	78	21	7.2	3.3	3	3		4.6		100	103	34	6.6	4.6	100	70	37	30	62
TENNESSEE																									
DYERSBURG																									
1	SLM	41	34	1.07	46	4.8	83	22	6.7	2.2	2	4		3.7		90	103	34	6.7	4.7	120	90	16	14	62
MILLINGTON																									
1	SLM LT SP	42	34	1.07	45	4.4	81	20	6.6	2.6	3	3		5.6		95	98	35	6.3	4.3	120	90	20	16	74
SPRING CREEK																									
1	SLM	41	34	1.03	45	4.6	85	21	6.0	3.0	3	4		4.8		90	94	31	6.2	4.5	110	90	24	13	53
SOUTHWEST AREA																									
CENTRAL TEXAS																									
BATESVILLE																									
3	SLM	41	35	1.10	46	4.4	80	21	6.9	2.5	3	3		5.1		95	103	35	6.6	4.7	100	70	31	21	61
CRCKETT																									
2	SLM	41	34	1.06	47	4.4	93	21	5.8	2.4	2	3		6.0		80	110	37	6.2	4.6	100	90	23	19	65
NAVASOTA																									
2	SLM	41	35	1.13	45	3.6	80	21	6.9	2.5	2	3		5.3		85	115	44	7.7	5.3	90	70	30	21	79

Table 3 --Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1973--(Continued)

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns									
No	Grade	Stple	32s	Digital Fibrograph		Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non- Lint	Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imprfct'ns		Spin. Potent- ial	
				2.5% span	Unif.		Zero	1/8" Gage			G/tex	Pct		Mpsi	Rdg	In	Pct	Gra	Yel	Pct	Lbs		Lbs
WEST																							
ARIZONA																							
CHANDLER																							
1	MID		31	35	1.10	44	4.7	89	25	6.0	0	3	4.8	108	37	6.6	4.7	110	90	21	15	63	
PARKER																							
1	MID		31	35	1.14	45	4.5	86	24	7.2	1	3	4.8	113	40	6.2	4.7	110	70	21	13	69	
SELMA																							
1	MID LT SP		32	35	1.15	45	4.7	80	23	7.9	1	3	4.9	113	42	7.0	5.2	120	90	13	11	73	
CALIFORNIA																							
BUTTONWILLOW																							
1	MID		31	35	1.11	44	4.4	95	28	6.0	1	3	5.1	120	42	5.8	4.4	100	70	36	25	63	
SHAFTER																							
1	MID		31	35	1.09	47	4.4	99	29	5.6	1	3	4.9	130	49	5.8	4.4	100	80	25	17	76	
TULARE																							
1	SLM		41	36	1.11	46	4.3	103	26	6.0	2	3	4.8	128	47	6.3	4.5	100	80	27	14	68	

Table 4 --Cotton, American upland long staple: Quality characteristics by production areas, crop of 1973

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns														
No	Grade	Stple	32s	Digital Fibrograph		Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non- Lint	Color Raw Stock		P & C Comber Waste	Strength		Elongation		Appearance Index		Imprfct'ns		Spin. Potent- ial						
				2.5% span	Unif.		Zero Gage	1/8" Gage			Pct	G/tex		Pct	No	Yel	Pct	Lbs	Ibs	Pct	Pct		22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	No	No
SOUTHEAST AREA																												
ALABAMA																												
BELLEVILLE																												
51	LM	34	1.10	45	4.6	80	22	7.2	3.8	3	3	9.0	* 18.3	101	31	6.6	4.7	120	100	19	13	66						
														80 PERCENT														
														113	40	7.1	5.3	130	100	12	8							
GEORGIA																												
COWPER																												
41	SLM	35	1.13	47	5.1	84	23	6.6	2.5	3	4	7.3	* 15.3	109	36	6.3	4.5	130	100	13	7	74						
														100 PERCENT														
														123	44	6.7	4.8	130	110	4	4							
MADISON																												
42	SLM LT SP	34	1.12	44	4.6	83	23	6.7	4.0	4	4	8.7	* 18.1	108	34	6.7	4.7	130	90	16	15	67						
														100 PERCENT														
														124	44	6.9	5.2	130	100	9	5							
SOUTH CAROLINA																												
HARTSVILLE																												
51	LM	35	1.17	44	4.5	81	23	6.6	4.4	3	3	8.5	* 17.0	106	36	6.2	4.7	120	90	14	13	80						
														100 PERCENT														
														121	43	6.5	4.8	130	100	9	6							

* Comber Waste and Combed Yarn Data